



# PEKTRON PEEK:

**Built for Use Up to 300°C (572°F) and 30,000 psi (206 MPa)**

Material & Design Solutions' (MDS) PEKTRON PEEK is an excellent choice for high temperature, high pressure applications in aggressive chemical environments. These injection molded PEEK compounds have been qualified for use up to 300°C (572°F) and 30,000 psi (206 MPa).

PEKTRON PEEK high performance thermoplastics offer outstanding chemical and abrasive resistance, as well as wear properties, in a broad spectrum of industries and applications. The injection molded compounds demonstrate excellent resistance to hot water and steam and are unaffected by continuous exposure up to 300°C (572°F).

## PEKTRON PEEK Finished Parts & Typical Applications

MDS offers PEKTRON PEEK in the form of finished parts machined out of injection molded stock shapes for critical service applications. Typical applications include:

- ✓ Valve seats
- ✓ Bearings
- ✓ V-rings
- ✓ Electrical insulators
- ✓ Backup rings
- ✓ Spring energized seals

## PEKTRON PEEK Stock Shapes

MDS offers PEKTRON PEEK in the form of rods and tubes ranging from 1-inch to 21-inch (2.54 cm to 53.34 cm) diameter tubes.

# PEKTRON PEEK & PEK Grades



## PEKTRON PEEK 1000 (Virgin PEEK)

Virgin PEEK has high elongation and great impact strength.

## PEKTRON PEEK 1030 (30% Glass Filled PEEK)

Glass filled PEEK has increased strength, no springing issues, good creep resistance, and is not conductive.

## PEKTRON PEK 4000 (Virgin PEK)

Virgin PEK offers strong dimensional stability, reliable heat resistance, and good mechanical strength in injection molded applications.

## PEKTRON PEEK 2030 (30% Carbon Filled PEEK)

Carbon filled PEEK is conductive, has excellent strength, and good creep resistance.

## PEKTRON PEEK & PEK Typical Properties

Below is a chart outlining the typical properties of PEKTRON PEEK & PEK. Please keep in mind that these typical values are not intended for specification purposes. If minimum certifiable properties are required please see your local Material & Design Solutions representative.

Property	Units	Test Method	PEKTRON 1000	PEKTRON 1030	PEKTRON 2030	PEKTRON 4000
Specific Gravity	-	ASTM D792, ISO 1183	1.30	1.51	1.41	1.30
Tensile Strength	psi / MPa	ASTM D638, ISO 527	14,000 / 96	26,000 / 185	38,000 / 262	110
Dielectric Strength (2.00mm)	kV/mm	IEC 60243-1	23	25	-	23
Elongation	%	ASTM D638, ISO 527	40	2.8	1.7	15
Flexural Modulus	psi / GPa	ASTM D790, ISO 178	550,000 / 3.8	1,500,000 / 11	3,400,000 / 23	4500
Hardness (Shore D)	Shore D	ASTM D2240, ISO 868	86	87	87	84
Heat Deflection Temperature	°F / °C	ASTM D648, ISO 75-f	306 / 152	622 / 328	637 / 336	N/A
Coefficient of Thermal Expansion (<289°F / <143°C)	in/in/°F / ppm/K	ASTM D696, ISO 11359	$2.6 \times 10^{-5}$ / 55	$1.2 \times 10^{-5}$ / 45	$0.8 \times 10^{-5}$ / 5	$10^{-5}$ / 1.1
Coefficient of Thermal Expansion (>289°F / >143°C)	in/in/°F / ppm/K	ASTM D696, ISO 11359	$6.0 \times 10^{-5}$ / 140	$1.2 \times 10^{-5}$ / 18	$0.8 \times 10^{-5}$ / 5	$10^{-5}$ / 1.1

\*These typical values are not intended for specification purposes.